

## REMARKS

Claims 1-3, 5 and 6 are pending in the application. Claims 1-2 are rejected. Claims 3, 5 and 6 are objected to. Claim 6 is amended. Claim 4 is cancelled without prejudice or disclaimer. Claim 7 is newly presented. No new subject matter is added.

Claim 6 is amended to correct clerical errors.

Claim 1 is rejected under the judicially created doctrine of double patenting over claim 1 of U.S. Patent 6,608,629. A terminal disclaimer is filed herewith.

Claim 1 is provisionally rejected under the judicially created doctrine of double patenting over claim 1 of co-pending U.S. Patent Application S/N: 09/810,839. A terminal disclaimer is filed herewith.

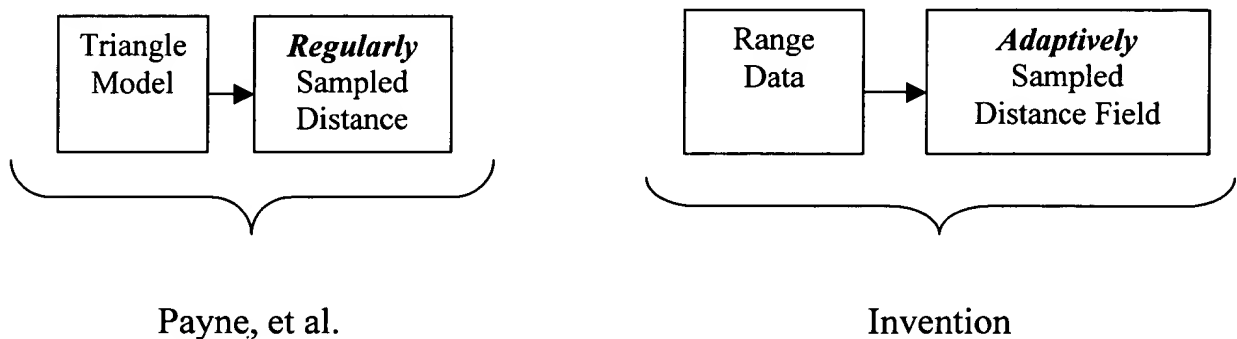
Claim 1 is provisionally rejected under the judicially created doctrine of double patenting over claim 1 of co-pending U.S. Patent Application S/N: 09/810,261. A terminal disclaimer is filed herewith.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al., in view of Jenkins, (U.S. 6,028,608).

Payne, et al., describe a method for generating a *regularly* sampled distance field from a *triangle model*. At page 66, col. 2, in the section titled "Distance fields," Payne describes "[w]e first discuss computing distance from single triangles, then build an optimized algorithm for computing the distance field from an entire closed surface." As would be readily understood by a person of ordinary skill in the art,

triangle models are not range data. Payne takes single triangles as input to generate his regularly sampled distance field. Claimed is generating an adaptively sampled distance field from the range data. The invention takes as input range data and converts the range data directly to an adaptively sampled distance field. Not only is the input to Payne different than what is claimed, the output is also different.

This difference between Payne and the present invention can be illustrated as follows:



Payne does not describe a single element of what is claimed. Therefore, Payne can never be used to make the invention obvious.

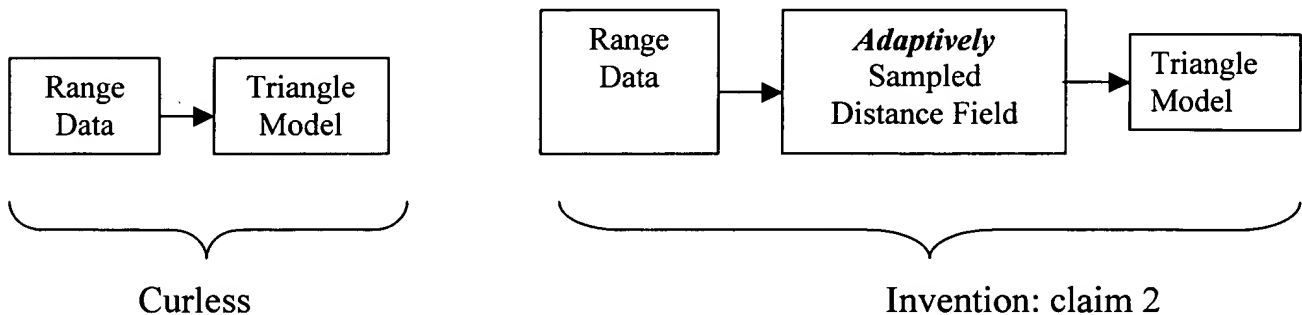
Jenkins fails to cure the defects of Payne. At col. 2, lines 10-24, referenced by the Examiner, Jenkins describes sampling image data having some resolution and generating an output image having a different resolution. Jenkins never generates a distance field of any kind. The input to Jenkins is an image region. The input to Payne is a triangle model. The input to the invention is range data. The output of Jenkins is an image. The output of Payne is a *regularly* sampled distance field. The output of the invention is an adaptively sampled distance field. Jenkins, Payne, and the invention each perform different operations on different input to

generate different output. Therefore, Jenkins never be combined with Payne to make the invention obvious.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al., in view of Jenkins, in further view of Curless, et al.

As stated above with respect to claim 1, Jenkins never be combined with Payne to make the invention obvious. Curless fails to cure the defects of Payne and Jenkins.

Further, Curless converts range data directly to a triangle model, see Figure 1 of Curless and illustration below. Claimed is converting the adaptively sampled distance field to a triangle model. None of the references describe converting range data to an adaptively sampled distance field, or converting an adaptively sampled distance field to a triangle model as claimed.



Therefore, the combination of Payne, Jenkins and Curless can never be used to make the invention obvious. For these reasons at least, the Examiner is requested to reconsider and withdraw his rejections of claims 1 and 2 based on Payne, Jenkins and Curless.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to expedite resolution of any remaining issues and further to expedite passage of the application to issue, if any further comments, questions or suggestions arise in connection with the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-0749 and please credit any excess fees to such deposit account.

Respectfully submitted,

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